

REMARKS

Claims 1-20, 36-41, 51-70 and 86 were pending and rejected. In response, claims 1, 3, 5, 11, 14, 16, 51, 53, 55, 61, 64, 66 and 86 are amended. Claims 36-41 are canceled. Applicants thank the Examiner for examination of the claims pending in this application and address the Examiner's comments below. Based on the above Amendment and the following Remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections, and withdraw them.

Response to Claim Objections

On page 11 of the Office Action, the Examiner objects to claims 36 and 51 for the following informalities: a memory and processor is required in order to process the software in order to have real-world value. Applicants have canceled claim 36 and amended claim 51 to recite "an apparatus **comprising a memory and a processor** for performing a transaction on a database." Based on this amendment to claim 51, Applicants submit that the pending claims are no longer objectionable.

Response to Rejection Under 35 USC § 112, Paragraph 2

On page 4 of the Office Action, the Examiner rejects claims 1-20, 36-41, 51-70 and 86 under 35 USC 112, **second paragraph**, as allegedly being incomplete for omitting essential elements, and further states that the step of updating the second database is missing. Applicants disagree. Updating the second database is not essential to the claimed invention. Applicants respectfully request the Examiner point out why he believes that updating the database is essential to the claimed invention.

The Examiner further rejects claim 86 for there allegedly being insufficient antecedent basis for the limitation “tangibly embodying” recited in the claim. In response, Applicants have deleted “tangibly embodying” from claim 86 and amended the claim to recite “the program storage device containing a program of instructions executable by the machine to perform a method for performing a transaction on a database.” This amendment has been made to improve readability of the claims, and does not narrow the scope of protection with respect to the prior art, or with respect to potentially infringing devices/compositions/articles. Applicants submit that with this amendment, claim 86 now is in proper form including antecedent basis for all terms used.

Response to Rejection Under 35 USC § 101

On page 4 of the Office Action, the Examiner rejects claims 1-20, 36-41, 51-70 and 86 under 35 USC 101 for allegedly not producing useful, concrete and tangible results. Applicants respectfully submit that, **placing** a message in a message queue, as recited in claims 1, 51 and 86, and similarly recited in claim 36, does provide a tangible result having real-world value and, therefore, directs the claims and their dependent claims to statutory subject matter. In fact, it is this act that allows subsequent recovery and synchronization of the redundant database.

Response to Rejection Under 35 USC § 102(e)

On page 5 of the Office Action, the Examiner rejects claims 1-20, 36-41, 51-70 and 86 under 35 USC § 102(e) as allegedly being anticipated by U.S. Patent No. 6,523,036 (“Hickman”). This rejection is respectfully traversed.

Claim 1, as amended, now recites a method for performing a transaction on a redundant database including a first database and a second database, the method comprising:

sending a set of database modifications corresponding to the transaction to said first database;
placing a message in a message queue before sending a commit command corresponding to said set of database modifications to either the first database or the second database, said message **comprising a representation of objects** inserted, updated, or deleted in the transaction;
sending a first commit command to the first database; and;
sending said set of database modifications and a second commit command to said second database.

The message in claim 1 comprises a representation of objects modified in a database transaction, and the message is stored in a message queue. When one database fails, the corresponding messages in its message queue are not discarded. Instead, the database inserts, updates, and deletes that are captured in the messages are replayed when the database is recovered. Thus, the message in the claimed invention provides a mechanism for restoring a failed database to service and bring it up-to-date.

These aspects of the claimed invention are not disclosed or suggested by Hickman. In col. 27, lines 12-25, as cited by the Examiner, Hickman merely describes a fragment map reassignment message that is used to move a fragment from one cluster to another. The message indicates the source and destination clusters, and the highest and lowest fragment numbers in the range. However, the message in Hickman does not comprise “a representation of objects inserted, updated, or deleted in the transaction.”

In *Response to Arguments*, the Examiner asserts that Hickman teaches this limitation as “all fragment maps on bases are **updated** via a special-purpose transaction mechanism.” Applicants respectfully disagree. Assuming for the sake of argument that this update is performed on object in the course of processing a database transaction, Hickman does not

include this update in the reassignment message. Therefore, Hickman does not anticipate claim 1. Independent claims 51 and 86 recite similar limitations as claim 1. Thus, Applicants submit that claims 1, 51 and 86 are patentably distinguishable over the cited reference.

Claims 2-20 and 52-70 variously depend from claims 1, 51 and 86, which are shown above to be patentable over the cited reference. For at least these reasons, Applicants submit that claims 2-20 and 52-70 also are patentably distinguishable over the cited reference.

Conclusion

In sum, Applicants respectfully submit that claims 1-20, 36-41, 51-70 and 86, as presented herein, are not anticipated by the cited reference. Therefore, Applicants request reconsideration of the basis for the rejections to these claims and request allowance of them.

In addition, Applicants respectfully invite the Examiner to contact Applicants' representative at the number provided below if the Examiner believes it will help expedite furtherance of this application.

Respectfully submitted,
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Dated: June 14, 2007

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